ACIDIC PRECIPITATION IN ONTARIO STUDY

ANNUAL STATISTICS OF CONCENTRATION: CUMULATIVE AMBIENT AIR MONITORING NETWORK 1987

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1987

Report prepared by:
Atmospheric Research and Special Projects Section
Air Resources Branch
Ontario Ministry of the Environment

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This report was prepared by Diane Green of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Precipitation samples were collected by a large number of site operators, whose names cannot be individually mentioned here, under the coordination of the APIOS environmental technicians Scott Kennedy (in the Southwestern Region), Steve Elliott (in Southeastern Region), Wim Smits (in Northwestern Region), Bill Trayling (Northeastern Region), and J.P. Varto (in Central Region). Sample handling was carried out by Sue Lampinen and Gail Fielding. Chemical analyses were performed at the Laboratory Services Branch under the coordination of Frank Tomassini. Invaluable clerical and computer assistance were provided by Peter Maheras, Joseph Lamb and Roberto Banchon. All enquiries regarding the reported data should be directed to Neville Reid, Coordinator, Atmospheric Deposition and Chemistry Program, at (416) 326-1691.

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PART I

INTRODUCTION

INTRODUCTION

The data listed herein are a summary of the results acquired from the APIOS cumulative ambient air sampling network from January 1987 to December 1987. All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involves the application of a Dixon Ratio Test to concurrent data from all the sites in the same region over a given sampling period. Field comments are referred to in order to assist in the identification of problematic samples. Samples that were determined to be obvious outliers were flagged as unreliable ("U"). The sampler utilized for cumulative ambient air sampling is the Metrex AS-2 low volume air sampler. The sampler is loaded and the filter pack is exposed for 28 days beginning at 0700 h EST and terminating at 0700 h EST at the end of the sampling period. Sampling details are described in another document[1].

Station Identification

The station identification is defined by four descriptive fields (e.g. - Dorset/Cumulative/LoVol #20). The first field refers to the sampling location. The second and third fields describe the sampling interval and the instrumentation used respectively. The last numeric field refers to the index code utilized on the location map.

INTRODUCTION

This report was prepared by Diane Green. The statistical summaries presented in this report pertain to the 1987 analytical results obtained from the Acidic Precipitation in Ontario Study (APIOS) cumulative ambient air monitoring network. The relevant data can be obtained on request from the Air Resources Branch of the Ontario Ministry of the Environment. Any sample of which sampling period is less that 23 days or greater than 33 days is not included in the statistics calculations. All available data are utilized in the calculations except results reported as being unreliable (i.e., results are identified as unreasonable values by using the validation procedures; detailed description of the validation procedure is available from the Ministry upon request) or approximate (i.e., inexact results are reported due to laboratory difficulties, such as may be encountered in calibration or when the samples cannot be analyzed to confirm the reported values). In a very few cases, concentration levels exceeded the upper limit of the range of the chemical analysis. Rather than using the upper limit, a decision was made to exclude these values from the statistics generated in this report. Results labelled as <W are replaced by "zero". W is the level which the analytical technique cannot distinguish from zero. Prior to 1987, if a level was recorded less than one detection limit T, a value corresponding to one half the detection limit was utilized for statistical calculations as reported in the statistical summaries.

These values are no longer halved. Note that T is normally about ten times W, and values above the T criteria are considered to be precise and accurate. W corresponds to approximately one standard deviation of low level duplicate of real samples. In the presented statistics summaries, "Total Sulphur" is calculated by the summation of sulphur of Sulphur Dioxide" and "Sulphate".

Beginning in 1985, "Sulphur Dioxide" is corrected by the addition of nylon filter sulphate. In these reports sulphur loading on nylon filters is interpreted as sulphur dioxide. However, it is possible that organic sulphur compounds also contribute to this loading. Methods do not currently exist to quantify this contribution in routine network operation.

The statistical summaries presented in Parts III to IV include number of samples, mean (arithmetic/geometric), standard deviation (arithmetic/geometric), maximum, minimum, quartiles. These statistics are for an average sampling period.

Whatman 40 Blank Filters

The occurrence of non-zero blank values for the Whatman 40 filters used in the cumulative network should be borne in mind when interpreting data from this method. Typical loadings mg/filter) for these blank filters, are summarized in Table 1.

Table 1

Chemical of Filters Parameters	Total Samples	Blank Loading (μg/filter) Mean*	S.D.*	Number ≥W
Sulphate	107	5.0 <T	0	22
Nitrate	107	1.4 <T	0.3	25
Calcium	96	2.88	0.68	96
Magnesium	97	0.69	1.33	65
Aluminum	97	0.59	0.56	45
Cadmium	97	0.010	0.006	91
Copper	97	0.03	0.02	70
Iron	97	0.92	0.70	95
Manganese	97	0.20	0.51	35
Nickel	97	0.04	0.07	54
Lead	97	0.12	0.13	38
Vanadium	97	0.02	0.002	36
Zinc	97	0.23	0.13	39
Sodium	107	2.66	0.95	106
Potassium	103	1.16	1.50	103
Chloride	107	8.8	2.8	105

*Calculated for ≥W values only.

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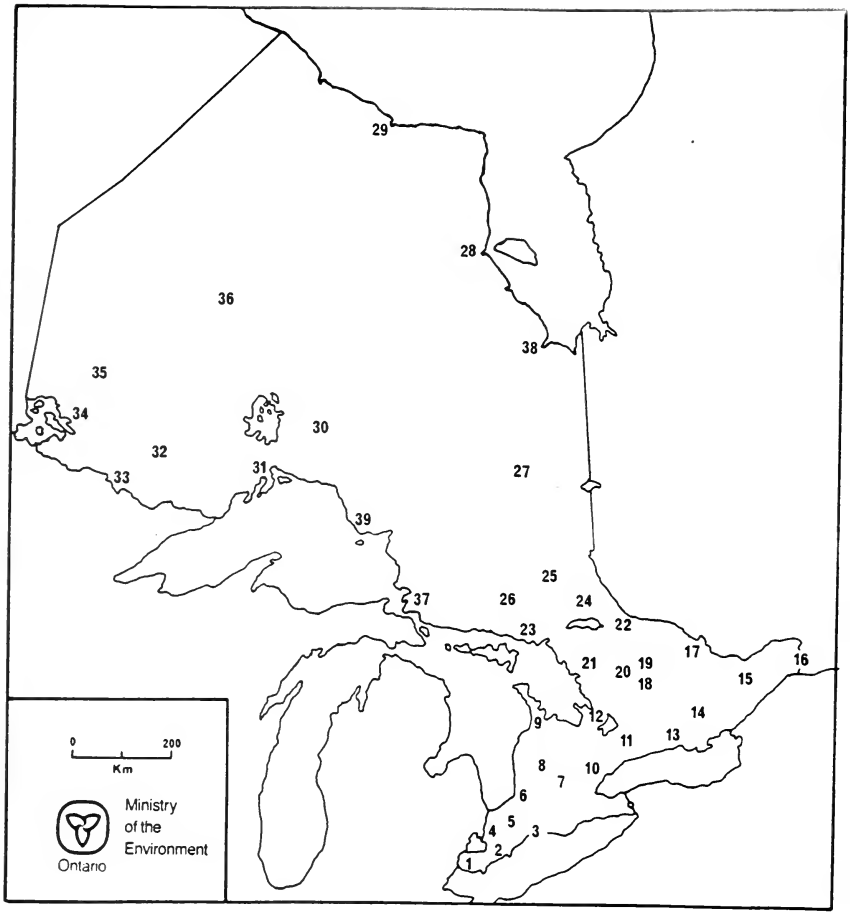
PART II

STATION DESCRIPTION AND LOCATION MAP



1. Colchester*
2. Merlin
3. Pt. Stanley*
4. Wilkesport*
5. Alvinston
6. Huron Park
7. Waterloo
8. Palmerston*
9. Shallow Lake*
10. Milton (removed March '84)
11. Uxbridge*
12. Coldwater
13. Campbellford*
14. Cloyne* (repl. Kalladar, June '83)
15. Smith's Falls*
16. Dalhousie Mills*
17. Golden Lake*
18. Wilberforce
19. Whitney
20. Dorset*
21. McKellar*
22. Mattawa*
23. Killarney*
24. Bear Island
25. Gowganda*
26. Azure Lake (repl. Ramsey, June '83)
27. Moonbeam*
28. Attawapiskat (rem. Feb '84)
29. Winisk (rem. Dec '86)
30. Geraldton (replaced Nakina, Aug '83)
31. Dorion*
32. Quetico Centre*
33. Lac la Croix
34. Experimental Lakes Area
35. Ear Falls*
36. Pickle Lake*
37. Turkey Lake*
38. Moosonee* (installed October '85)
39. Otter Island* (summer only)
40. Sutton, Quebec (Intercomparison Site)

* indicates both a wet and dry deposition network site

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS-ACIDIC PRECIPITATION IN ONTARIO STUDY
CUMULATIVE AMBIENT AIR SITES

STATION ID	MOE REGION	STATION NAME	ELEV (M)	LATITUDE (NORTH)	LONGITUDE (WEST)	UTM GRID CO-ORDINATES (NORTHING)	(EASTING)
000001-22-21-1041	SOUTHWESTERN	COLCHESTER	183	41°59'15"	82°55'41"	4649973	340284
000001-22-21-1061	SOUTHWESTERN	PORT STANLEY	213	42°40'22"	81°09'55"	4724277	486457
000001-22-21-1071	SOUTHWESTERN	WILKESPORT	183	42°42'11"	82°21'13"	4728515	389135
000001-22-21-1091	SOUTHWESTERN	SHALLOW LAKE	229	44°34'54"	81°06'58"	4936270	490782
000001-22-21-1101	SOUTHWESTERN	PALMERSTON	389	43°48'19"	80°54'12"	4850035	507776
000001-22-21-3011	CENTRAL	DORSET	320	45°13'26"	78°55'52"	5009656	662429
000001-22-21-3061	CENTRAL	UXBRIDGE	244	44°12'46"	79°12'38"	4896847	642958
000001-22-21-3081	CENTRAL	CAMPBELLFORD	175	44°17'28"	77°47'33"	4907783	277202
000001-22-21-4061	SOUTHEASTERN	SMITH'S FALLS	122	44°56'41"	75°57'48"	4977044	423999
000001-22-21-4071	SOUTHEASTERN	DALHOUSIE MILLS	69	45°19'00"	74°28'13"	5018048	541521
000001-22-21-4081	SOUTHEASTERN	GOLDEN LAKE	160	45°36'48"	77°12'03"	5053226	328397
000001-22-21-4091	SOUTHEASTERN	CLOYNE	259	44°49'10"	77°11'07"	4964999	327221
000001-22-21-5011	NORTHEASTERN	MCKELLAR	244	45°31'15"	79°55'19"	5041158	584196
000001-22-21-5021	NORTHEASTERN	KILLARNEY	183	45°58'20"	81°29'18"	5090859	462167
000001-22-21-5031	NORTHEASTERN	MATTAWA	198	46°16'39"	78°49'19"	5126968	667810
000001-22-21-5061	NORTHEASTERN	GOWGANDA	343	47°39'04"	80°46'32"	5277329	516647
000001-22-21-5071	NORTHEASTERN	MOONBEAM	244	49°19'40"	82°01'10"	5464175	425924
000001-22-21-5141	NORTHEASTERN	TURKEY LAKES	440	47°03'15"	84°24'20"	5214246	697468
000001-22-21-5161	NORTHEASTERN	MOOSONEE	8	51°12'35"	80°42'20"	5672970	520568
000001-22-21-5201	NORTHEASTERN	MCFARLANE LAKE	246	46°25'57"	81°57'03"	5142324	426948
000001-22-21-6011	NORTHWESTERN	DORION	244	48°50'33"	88°36'45"	5410982	381684
000001-22-21-6031	NORTHWESTERN	EAR FALLS	350	50°38'31"	93°13'13"	5609814	484424
000001-22-21-6041	NORTHWESTERN	PICKLE LAKE	360	51°02'41"	90°12'04"	5658308	696198
000001-22-21-6071	NORTHWESTERN	QUETICO CENTRE	420	48°24'44"	91°12'08"	5363461	633036
000001-22-21-6111	NORTHWESTERN	OTTER ISLAND	204	48°06'50"	86°04'25"	5329155	568954
000001-22-21-6121	NORTHWESTERN	GERALDTON	350	49°48'18"	86°45'52"	5516758	516950

PART III

SUMMARY STATISTICS OF OBSERVED CONCENTRATION BY STATION

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=CAMPBELLFORD LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	5.95	6.73	3.531	11.772	3.462	0.558	0.527
MINIMUM	1.19	2.37	0.065	0.239	0.242	0.260	0.040
ARITH. MEAN	3.53	3.79	0.469	1.675	1.210	0.378	0.143
ARITH. STD. DEV	1.46	1.61	1.077	3.552	1.156	0.098	0.153
GEOM. MEAN	3.22	3.54	0.167	0.715	0.803	0.368	0.103
1ST QUARTILE	2.58	2.59	0.081	0.451	0.361	0.303	0.059
2ND QUARTILE	3.13	3.29	0.138	0.560	0.544	0.380	0.092
3RD QUARTILE	4.67	5.01	0.183	0.801	2.258	0.449	0.165
MISSING VALUES	2	2	1	1	2	2	2

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	0.375	0.280	0.386	0.177	0.025	0.0162	0.004
MINIMUM	0.073	0.035	0.034	0.004	0.003	0.0037	0.001
ARITH. MEAN	0.196	0.125	0.149	0.061	0.016	0.0080	0.002
ARITH. STD. DEV	0.106	0.080	0.122	0.051	0.008	0.0042	0.001
GEOM. MEAN	0.172	0.103	0.109	0.043	0.013	0.0072	0.002
1ST QUARTILE	0.113	0.057	0.051	0.033	0.009	0.0049	0.001
2ND QUARTILE	0.188	0.124	0.124	0.046	0.015	0.0063	0.002
3RD QUARTILE	0.277	0.176	0.243	0.085	0.022	0.0112	0.004
MISSING VALUES	2	2	2	2	2	2	2

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	11	11	11	11	11	11.00	11.00
MAXIMUM	0.00362	0.0013	0.0238	0.02330	2.0038	3.76	15.30
MINIMUM	0.00045	0.0003	0.0017	0.00039	0.6156	1.84	0.31
ARITH. MEAN	0.00158	0.0008	0.0155	0.00387	1.2600	3.03	2.14
ARITH. STD. DEV	0.00121	0.0003	0.0078	0.00737	0.4993	0.68	4.63
GEOM. MEAN	0.00122	0.0008	0.0123	0.00150	1.1667	2.95	0.89
1ST QUARTILE	0.00070	0.0005	0.0087	0.00059	0.7911	2.36	0.55
2ND QUARTILE	0.00083	0.0007	0.0180	0.00082	1.1982	3.25	0.68
3RD QUARTILE	0.00276	0.0012	0.0220	0.00307	1.6796	3.53	0.98
MISSING VALUES	2	2	2	2	2	2.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=CLOYNE LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	10	10	10	10	10	10	10
MAXIMUM	16.19	6.88	0.227	1.284	0.854	1.072	0.236
MINIMUM	1.98	2.35	0.070	0.231	0.011	0.163	0.074
ARITH. MEAN	5.51	4.28	0.144	0.449	0.378	0.370	0.123
ARITH. STD. DEV	4.94	1.74	0.058	0.380	0.275	0.324	0.061
GEOM. MEAN	4.30	3.98	0.135	0.367	0.233	0.295	0.113
1ST QUARTILE	2.54	2.70	0.102	0.245	0.246	0.203	0.083
2ND QUARTILE	4.26	3.89	0.134	0.299	0.272	0.227	0.095
3RD QUARTILE	6.37	6.03	0.218	0.502	0.598	0.455	0.181
MISSING VALUES	3	3	3	3	3	3	3

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	10	10	10	10	10	10	10
MAXIMUM	0.683	0.263	0.354	0.136	0.042	0.0567	0.005
MINIMUM	0.105	0.018	0.013	0.003	0.009	0.0039	0.002
ARITH. MEAN	0.260	0.116	0.117	0.055	0.020	0.0140	0.003
ARITH. STD. DEV	0.207	0.075	0.119	0.043	0.011	0.0190	0.001
GEOM. MEAN	0.210	0.092	0.071	0.036	0.017	0.0087	0.002
1ST QUARTILE	0.136	0.072	0.028	0.026	0.011	0.0047	0.002
2ND QUARTILE	0.165	0.114	0.092	0.048	0.017	0.0067	0.002
3RD QUARTILE	0.374	0.133	0.181	0.083	0.022	0.0129	0.004
MISSING VALUES	3	3	3	3	3	3	3

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	10	10	10	10	10	10.00	10.00
MAXIMUM	0.00533	0.0059	0.0403	0.00182	1.3524	9.39	1.42
MINIMUM	0.00050	0.0007	0.0121	0.00035	0.5203	2.17	0.32
ARITH. MEAN	0.00198	0.0017	0.0211	0.00072	1.0641	4.18	0.59
ARITH. STD. DEV	0.00162	0.0019	0.0104	0.00052	0.2769	2.44	0.39
GEOM. MEAN	0.00154	0.0013	0.0193	0.00061	1.0238	3.75	0.51
1ST QUARTILE	0.00078	0.0008	0.0130	0.00036	0.9140	2.92	0.33
2ND QUARTILE	0.00160	0.0009	0.0180	0.00049	1.1855	3.30	0.43
3RD QUARTILE	0.00252	0.0017	0.0299	0.00090	1.2180	4.87	0.73
MISSING VALUES	3	3	3	3	3	3.00	3.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=COLCHESTER LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	41.15	14.32	0.704	1.625	1.405	1.091	0.226
MINIMUM	8.20	0.13	0.132	0.791	0.362	0.520	0.071
ARITH. MEAN	14.88	5.98	0.305	1.119	0.843	0.737	0.118
ARITH. STD. DEV	8.91	3.66	0.157	0.229	0.296	0.177	0.041
GEOM. MEAN	13.32	4.34	0.275	1.098	0.792	0.719	0.112
1ST QUARTILE	9.85	3.84	0.208	0.909	0.641	0.620	0.083
2ND QUARTILE	11.24	4.72	0.247	1.183	0.815	0.705	0.113
3RD QUARTILE	18.15	8.50	0.382	1.234	1.095	0.796	0.134
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.389	0.383	0.472	0.308	0.072	0.0173	0.007
MINIMUM	0.140	0.110	0.025	0.004	0.008	0.0097	0.002
ARITH. MEAN	0.215	0.228	0.164	0.169	0.028	0.0134	0.004
ARITH. STD. DEV	0.085	0.066	0.131	0.082	0.018	0.0025	0.001
GEOM. MEAN	0.203	0.219	0.124	0.128	0.023	0.0132	0.003
1ST QUARTILE	0.166	0.190	0.078	0.120	0.015	0.0112	0.003
2ND QUARTILE	0.182	0.217	0.111	0.166	0.025	0.0138	0.003
3RD QUARTILE	0.256	0.268	0.259	0.220	0.038	0.0153	0.004
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.01367	0.0075	0.0565	0.01682	2.9118	21.73	1.93
MINIMUM	0.00059	0.0014	0.0214	0.00056	0.3134	5.14	0.99
ARITH. MEAN	0.00297	0.0027	0.0416	0.00388	1.3511	9.43	1.42
ARITH. STD. DEV	0.00334	0.0016	0.0096	0.00561	0.8433	4.25	0.26
GEOM. MEAN	0.00218	0.0024	0.0405	0.00179	1.0991	8.79	1.40
1ST QUARTILE	0.00140	0.0017	0.0345	0.00081	0.5638	6.63	1.26
2ND QUARTILE	0.00203	0.0024	0.0416	0.00109	1.1083	8.36	1.44
3RD QUARTILE	0.00303	0.0031	0.0490	0.00555	2.0740	10.61	1.57
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=DALHOUSIE MILLS LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	5.49	6.17	0.173	1.110	1.632	0.985	6.117
MINIMUM	1.43	2.54	0.036	0.191	0.092	0.245	0.074
ARITH. MEAN	3.15	3.99	0.109	0.559	0.834	0.470	0.733
ARITH. STD. DEV	1.45	1.30	0.044	0.285	0.449	0.240	1.892
GEOM. MEAN	2.84	3.82	0.100	0.494	0.679	0.426	0.190
1ST QUARTILE	1.68	2.99	0.078	0.331	0.553	0.307	0.110
2ND QUARTILE	3.32	3.55	0.108	0.506	0.798	0.386	0.135
3RD QUARTILE	4.35	5.50	0.147	0.743	1.201	0.600	0.178
MISSING VALUES	1	1	1	1	1	1	1

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	0.606	0.272	0.373	0.159	0.036	0.0411	0.006
MINIMUM	0.112	0.038	0.027	0.003	0.009	0.0044	0.002
ARITH. MEAN	0.286	0.135	0.110	0.080	0.021	0.0216	0.003
ARITH. STD. DEV	0.161	0.082	0.113	0.048	0.009	0.0115	0.001
GEOM. MEAN	0.251	0.111	0.076	0.057	0.019	0.0181	0.003
1ST QUARTILE	0.167	0.066	0.035	0.047	0.014	0.0107	0.002
2ND QUARTILE	0.236	0.113	0.060	0.080	0.020	0.0240	0.003
3RD QUARTILE	0.442	0.196	0.147	0.107	0.028	0.0294	0.004
MISSING VALUES	1	1	1	1	1	1	1

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	11	11	11	11	11	11.00	11.00
MAXIMUM	0.00422	0.0037	0.0454	0.00396	1.1537	4.65	1.25
MINIMUM	0.00024	0.0006	0.0081	0.00032	0.4809	1.79	0.27
ARITH. MEAN	0.00177	0.0020	0.0260	0.00122	0.9018	2.91	0.67
ARITH. STD. DEV	0.00112	0.0009	0.0119	0.00121	0.2539	0.80	0.30
GEOM. MEAN	0.00143	0.0017	0.0231	0.00084	0.8629	2.81	0.61
1ST QUARTILE	0.00108	0.0012	0.0146	0.00042	0.6866	2.45	0.43
2ND QUARTILE	0.00148	0.0021	0.0276	0.00064	0.9742	2.88	0.63
3RD QUARTILE	0.00240	0.0025	0.0362	0.00225	1.1353	3.14	0.88
MISSING VALUES	1	1	1	1	1	1.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=DORION LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	1.78	2.27	0.117	0.228	0.638	0.389	0.713
MINIMUM	0.25	0.39	0.000	0.034	0.026	0.087	0.001
ARITH. MEAN	0.65	1.13	0.037	0.092	0.229	0.143	0.120
ARITH. STD. DEV	0.46	0.66	0.034	0.068	0.199	0.079	0.191
GEOM. MEAN	0.53	0.96	0.042	0.074	0.153	0.131	0.048
1ST QUARTILE	0.30	0.59	0.010	0.044	0.075	0.098	0.022
2ND QUARTILE	0.53	0.91	0.031	0.062	0.130	0.124	0.045
3RD QUARTILE	1.01	1.82	0.049	0.132	0.365	0.146	0.118
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	1.216	0.152	0.361	0.223	0.018	0.0055	0.030
MINIMUM	0.062	0.003	0.008	0.006	0.001	0.0006	0.001
ARITH. MEAN	0.195	0.071	0.104	0.095	0.007	0.0031	0.004
ARITH. STD. DEV	0.312	0.043	0.112	0.068	0.006	0.0017	0.008
GEOM. MEAN	0.122	0.053	0.053	0.064	0.004	0.0025	0.002
1ST QUARTILE	0.070	0.042	0.015	0.030	0.002	0.0014	0.001
2ND QUARTILE	0.107	0.061	0.081	0.084	0.006	0.0039	0.001
3RD QUARTILE	0.133	0.101	0.159	0.151	0.012	0.0046	0.002
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00316	0.0014	0.0078	0.01685	1.1386	1.59	0.35
MINIMUM	0.00013	0.0002	0.0006	0.00005	0.0000	0.26	0.04
ARITH. MEAN	0.00129	0.0006	0.0034	0.00324	0.4736	0.70	0.13
ARITH. STD. DEV	0.00097	0.0003	0.0026	0.00566	0.3187	0.41	0.08
GEOM. MEAN	0.00093	0.0005	0.0023	0.00065	0.4204	0.61	0.11
1ST QUARTILE	0.00051	0.0003	0.0007	0.00022	0.2784	0.39	0.07
2ND QUARTILE	0.00095	0.0005	0.0032	0.00034	0.4458	0.62	0.09
3RD QUARTILE	0.00220	0.0007	0.0059	0.00563	0.6226	0.96	0.17
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=DORSET LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	7.05	5.21	0.379	0.348	0.562	0.401	0.561
MINIMUM	1.00	1.19	0.065	0.083	0.054	0.080	0.014
ARITH. MEAN	3.25	3.12	0.151	0.216	0.241	0.173	0.086
ARITH. STD. DEV	1.59	1.28	0.079	0.072	0.145	0.080	0.144
GEOM. MEAN	2.86	2.86	0.138	0.203	0.203	0.161	0.052
1ST QUARTILE	2.13	2.01	0.111	0.171	0.131	0.135	0.033
2ND QUARTILE	3.48	3.38	0.134	0.217	0.215	0.147	0.044
3RD QUARTILE	4.00	4.16	0.156	0.278	0.283	0.189	0.068
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.286	0.269	0.277	0.151	0.037	0.0088	0.006
MINIMUM	0.084	0.025	0.003	0.006	0.001	0.0010	0.001
ARITH. MEAN	0.144	0.100	0.100	0.047	0.009	0.0039	0.003
ARITH. STD. DEV	0.066	0.076	0.094	0.039	0.009	0.0020	0.002
GEOM MEAN	0.133	0.078	0.050	0.035	0.006	0.0034	0.002
1ST QUARTILE	0.099	0.050	0.012	0.019	0.004	0.0023	0.002
2ND QUARTILE	0.122	0.057	0.067	0.040	0.008	0.0037	0.003
3RD QUARTILE	0.178	0.170	0.183	0.066	0.010	0.0051	0.004
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.01028	0.0017	0.0250	0.01362	2.8471	4.65	0.73
MINIMUM	0.00012	0.0002	0.0036	0.00014	0.7458	1.63	0.19
ARITH. MEAN	0.00241	0.0007	0.0112	0.00267	1.2376	2.66	0.37
ARITH. STD. DEV	0.00269	0.0004	0.0066	0.00476	0.5777	0.78	0.14
GEOM. MEAN	0.00126	0.0007	0.0096	0.00087	1.1476	2.57	0.35
1ST QUARTILE	0.00027	0.0005	0.0062	0.00033	0.8519	2.15	0.28
2ND QUARTILE	0.00225	0.0006	0.0100	0.00058	1.0938	2.74	0.34
3RD QUARTILE	0.00295	0.0009	0.0134	0.00214	1.3446	2.83	0.42
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=EAR FALLS LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	1.59	2.22	0.095	0.195	0.367	0.451	0.168
MINIMUM	0.25	0.50	0.006	0.036	0.025	0.082	0.009
ARITH. MEAN	0.60	0.98	0.043	0.079	0.156	0.174	0.063
ARITH. STD. DEV	0.41	0.54	0.028	0.049	0.109	0.102	0.047
GEOM. MEAN	0.49	0.88	0.035	0.069	0.122	0.154	0.048
1ST QUARTILE	0.27	0.60	0.025	0.047	0.084	0.101	0.025
2ND QUARTILE	0.51	0.80	0.035	0.063	0.106	0.146	0.060
3RD QUARTILE	0.81	1.16	0.066	0.096	0.266	0.222	0.087
MISSING VALUES	1	1	1	1	1	1	1

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.303	0.193	0.203	0.071	0.015	0.0065	0.004
MINIMUM	0.069	0.022	0.010	0.006	0.001	0.0010	0.000
ARITH. MEAN	0.123	0.073	0.065	0.041	0.006	0.0029	0.001
ARITH. STD. DEV	0.069	0.052	0.059	0.022	0.004	0.0016	0.001
GEOM. MEAN	0.111	0.059	0.046	0.034	0.004	0.0025	0.001
1ST QUARTILE	0.087	0.032	0.028	0.020	0.003	0.0015	0.000
2ND QUARTILE	0.091	0.052	0.037	0.041	0.006	0.0025	0.001
3RD QUARTILE	0.125	0.113	0.093	0.063	0.007	0.0041	0.001
MISSING VALUES	1	2	1	1	1	1	1

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.03632	0.0010	0.0046	0.01094	1.0529	1.54	0.27
MINIMUM	0.00037	0.0002	0.0006	0.00017	0.1775	0.29	0.06
ARITH. MEAN	0.00455	0.0005	0.0026	0.00272	0.4437	0.63	0.12
ARITH. STD. DEV	0.01017	0.0002	0.0015	0.00419	0.2433	0.35	0.07
GEOM. MEAN	0.00145	0.0004	0.0020	0.00076	0.3937	0.56	0.11
1ST QUARTILE	0.00056	0.0002	0.0009	0.00023	0.2615	0.39	0.08
2ND QUARTILE	0.00094	0.0004	0.0027	0.00031	0.3482	0.52	0.09
3RD QUARTILE	0.00301	0.0006	0.0039	0.00642	0.5594	0.75	0.17
MISSING VALUES	1	1	1	1	1	1.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=GERALDTON LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	2.48	2.01	0.146	0.228	0.628	0.245	0.387
MINIMUM	0.00	0.02	0.000	0.006	0.012	0.059	0.000
ARITH. MEAN	0.63	0.86	0.033	0.069	0.209	0.111	0.062
ARITH. STD. DEV	0.71	0.67	0.038	0.065	0.186	0.046	0.101
GEOM. MEAN	0.54	0.46	0.027	0.047	0.115	0.105	0.036
1ST QUARTILE	0.22	0.21	0.007	0.027	0.030	0.084	0.011
2ND QUARTILE	0.38	0.82	0.028	0.049	0.236	0.099	0.035
3RD QUARTILE	0.80	1.48	0.043	0.093	0.327	0.124	0.064
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.234	0.151	0.150	0.104	0.011	0.0060	0.010
MINIMUM	0.032	0.003	0.003	0.003	0.001	0.0006	0.000
ARITH. MEAN	0.099	0.047	0.043	0.040	0.004	0.0019	0.002
ARITH. STD. DEV	0.053	0.044	0.046	0.034	0.004	0.0018	0.004
GEOM. MEAN	0.088	0.030	0.024	0.025	0.003	0.0013	0.001
1ST QUARTILE	0.072	0.014	0.010	0.009	0.001	0.0006	0.000
2ND QUARTILE	0.082	0.032	0.022	0.042	0.003	0.0010	0.001
3RD QUARTILE	0.111	0.070	0.078	0.067	0.007	0.0030	0.002
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00296	0.0012	0.0055	0.01258	1.4028	1.91	0.37
MINIMUM	0.00023	0.0002	0.0006	0.00008	0.0000	0.01	0.01
ARITH. MEAN	0.00135	0.0006	0.0024	0.00275	0.4349	0.60	0.10
ARITH. STD. DEV	0.00084	0.0004	0.0018	0.00476	0.3711	0.56	0.10
GEOM. MEAN	0.00108	0.0005	0.0018	0.00056	0.3550	0.29	0.07
1ST QUARTILE	0.00071	0.0003	0.0007	0.00016	0.1440	0.18	0.05
2ND QUARTILE	0.00119	0.0005	0.0020	0.00027	0.4236	0.54	0.08
3RD QUARTILE	0.00208	0.0009	0.0040	0.00470	0.4899	0.82	0.12
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=GOLDEN LAKE LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	3.46	5.57	0.400	1.722	0.909	0.324	0.993
MINIMUM	1.16	1.89	0.050	0.050	0.018	0.115	0.050
ARITH. MEAN	2.12	3.12	0.131	0.323	0.265	0.199	0.265
ARITH. STD. DEV	0.89	1.17	0.096	0.457	0.256	0.057	0.302
GEOM. MEAN	1.95	2.95	0.111	0.193	0.172	0.192	0.167
1ST QUARTILE	1.28	2.16	0.080	0.090	0.097	0.155	0.087
2ND QUARTILE	1.90	2.84	0.093	0.232	0.149	0.196	0.135
3RD QUARTILE	3.12	4.08	0.144	0.284	0.384	0.227	0.377
MISSING VALUES	2	2	1	1	2	2	2

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.277	0.190	0.213	0.115	0.027	0.0086	0.005
MINIMUM	0.095	0.020	0.003	0.004	0.005	0.0033	0.001
ARITH. MEAN	0.157	0.080	0.065	0.061	0.013	0.0052	0.003
ARITH. STD. DEV	0.051	0.052	0.066	0.035	0.007	0.0017	0.001
GEOM. MEAN	0.150	0.065	0.039	0.048	0.011	0.0050	0.002
1ST QUARTILE	0.119	0.035	0.021	0.038	0.008	0.0038	0.002
2ND QUARTILE	0.161	0.086	0.035	0.054	0.010	0.0051	0.002
3RD QUARTILE	0.179	0.102	0.110	0.100	0.019	0.0063	0.004
MISSING VALUES	2	2	2	2	2	2	2

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE N/L UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00432	0.0018	0.0261	0.00449	1.5713	2.81	2.12
MINIMUM	0.00040	0.0003	0.0058	0.00025	0.7386	1.43	0.13
ARITH. MEAN	0.00168	0.0011	0.0109	0.00091	1.1278	2.10	0.45
ARITH. STD. DEV	0.00128	0.0005	0.0058	0.00127	0.2732	0.46	0.55
GEOM. MEAN	0.00129	0.0010	0.0098	0.00056	1.0964	2.05	0.32
1ST QUARTILE	0.00076	0.0008	0.0071	0.00031	0.8357	1.58	0.16
2ND QUARTILE	0.00132	0.0011	0.0091	0.00042	1.2460	2.20	0.35
3RD QUARTILE	0.00254	0.0016	0.0134	0.00064	1.3133	2.35	0.45
MISSING VALUES	2	2	2	2	2	2.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=GOWGANDA LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	6.37	4.01	0.152	0.188	0.359	0.390	0.107
MINIMUM	1.07	0.43	0.044	0.056	0.022	0.109	0.010
ARITH. MEAN	3.70	1.95	0.087	0.128	0.129	0.203	0.048
ARITH. STD. DEV	1.50	0.93	0.037	0.040	0.095	0.089	0.029
GEOM. MEAN	3.35	1.72	0.081	0.122	0.103	0.187	0.040
1ST QUARTILE	2.67	1.56	0.062	0.105	0.070	0.121	0.029
2ND QUARTILE	3.78	1.77	0.073	0.118	0.099	0.207	0.043
3RD QUARTILE	4.65	2.29	0.120	0.164	0.164	0.251	0.068
MISSING VALUES	1	1	1	1	1	1	1

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	0.295	0.179	0.254	0.087	0.015	0.0065	0.008
MINIMUM	0.067	0.005	0.003	0.003	0.001	0.0014	0.001
ARITH. MEAN	0.162	0.082	0.095	0.044	0.006	0.0033	0.004
ARITH. STD. DEV	0.079	0.074	0.094	0.030	0.004	0.0018	0.002
GEOM. MEAN	0.145	0.046	0.049	0.032	0.005	0.0029	0.004
1ST QUARTILE	0.109	0.015	0.019	0.021	0.003	0.0018	0.002
2ND QUARTILE	0.141	0.043	0.043	0.035	0.006	0.0029	0.005
3RD QUARTILE	0.244	0.172	0.185	0.078	0.008	0.0045	0.006
MISSING VALUES	1	1	1	1	1	1	1

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	11	11	11	11	11	11.00	11.00
MAXIMUM	0.01351	0.0017	0.0185	0.01930	1.9927	3.74	0.34
MINIMUM	0.00013	0.0002	0.0037	0.00006	0.2945	1.38	0.13
ARITH. MEAN	0.00283	0.0008	0.0091	0.00303	0.9640	2.50	0.22
ARITH. STD. DEV	0.00399	0.0005	0.0050	0.00616	0.4921	0.70	0.07
GEOM. MEAN	0.00134	0.0006	0.0078	0.00065	0.8450	2.40	0.21
1ST QUARTILE	0.00048	0.0003	0.0042	0.00022	0.5108	2.01	0.16
2ND QUARTILE	0.00150	0.0006	0.0089	0.00041	0.9539	2.49	0.19
3RD QUARTILE	0.00347	0.0013	0.0129	0.00284	1.2222	2.93	0.27
MISSING VALUES	1	1	1	1	1	1.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=KILLARNEY LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	14	14	14	14	14	14	14
MAXIMUM	12.10	4.30	0.249	0.370	0.474	0.334	0.139
MINIMUM	1.52	1.38	0.039	0.123	0.027	0.099	0.021
ARITH. MEAN	5.67	2.64	0.121	0.247	0.192	0.219	0.055
ARITH. STD. DEV	3.67	0.94	0.059	0.085	0.127	0.064	0.029
GEOM. MEAN	4.57	2.49	0.108	0.232	0.151	0.210	0.050
1ST QUARTILE	2.17	1.89	0.080	0.182	0.085	0.185	0.033
2ND QUARTILE	4.69	2.50	0.118	0.245	0.182	0.211	0.052
3RD QUARTILE	8.85	3.55	0.146	0.334	0.256	0.256	0.065
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	14	14	14	14	14	14	14
MAXIMUM	0.237	0.155	0.187	0.070	0.019	0.0061	0.008
MINIMUM	0.084	0.025	0.028	0.011	0.002	0.0020	0.002
ARITH. MEAN	0.118	0.080	0.092	0.047	0.009	0.0039	0.005
ARITH. STD. DEV	0.041	0.043	0.048	0.019	0.005	0.0012	0.002
GEOM. MEAN	0.113	0.069	0.078	0.042	0.007	0.0037	0.004
1ST QUARTILE	0.089	0.046	0.038	0.029	0.004	0.0029	0.003
2ND QUARTILE	0.106	0.072	0.105	0.048	0.008	0.0042	0.005
3RD QUARTILE	0.130	0.113	0.126	0.064	0.012	0.0047	0.007
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	14	14	14	14	14	14.00	14.00
MAXIMUM	0.00953	0.0064	0.0239	0.01171	1.3634	7.27	0.58
MINIMUM	0.00052	0.0002	0.0023	0.00003	0.2811	1.22	0.17
ARITH. MEAN	0.00270	0.0012	0.0106	0.00263	0.7703	3.71	0.37
ARITH. STD. DEV	0.00225	0.0016	0.0067	0.00412	0.3510	1.85	0.13
GEOM. MEAN	0.00213	0.0008	0.0087	0.00081	0.6880	3.30	0.35
1ST QUARTILE	0.00150	0.0004	0.0047	0.00040	0.4622	2.25	0.26
2ND QUARTILE	0.00192	0.0008	0.0096	0.00061	0.8139	3.14	0.34
3RD QUARTILE	0.00347	0.0012	0.0141	0.00346	1.0223	5.25	0.47
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=MATTAWA LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	10.91	5.22	0.153	0.211	0.623	0.501	0.191
MINIMUM	0.76	1.63	0.028	0.050	0.057	0.132	0.044
ARITH. MEAN	3.60	2.67	0.073	0.128	0.287	0.286	0.098
ARITH. STD. DEV	2.92	1.08	0.031	0.046	0.208	0.106	0.039
GEOM. MEAN	2.75	2.49	0.067	0.120	0.213	0.268	0.091
1ST QUARTILE	1.84	1.78	0.054	0.097	0.105	0.214	0.070
2ND QUARTILE	2.19	2.26	0.067	0.125	0.218	0.278	0.092
3RD QUARTILE	5.52	3.18	0.087	0.160	0.476	0.326	0.129
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.312	1.580	2.590	0.625	0.014	0.0367	0.026
MINIMUM	0.126	0.054	0.027	0.027	0.003	0.0036	0.002
ARITH. MEAN	0.169	0.579	0.777	0.268	0.009	0.0167	0.005
ARITH. STD. DEV	0.050	0.511	0.818	0.211	0.003	0.0111	0.006
GEOM. MEAN	0.164	0.385	0.368	0.190	0.008	0.0133	0.004
1ST QUARTILE	0.139	0.205	0.134	0.106	0.006	0.0077	0.003
2ND QUARTILE	0.150	0.430	0.416	0.201	0.008	0.0133	0.004
3RD QUARTILE	0.188	0.898	1.419	0.495	0.011	0.0259	0.005
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00783	0.0029	0.1599	0.01703	1.1356	6.33	0.34
MINIMUM	0.00016	0.0003	0.0058	0.00007	0.4225	1.09	0.10
ARITH. MEAN	0.00245	0.0011	0.0278	0.00312	0.7374	2.69	0.20
ARITH. STD. DEV	0.00194	0.0009	0.0404	0.00529	0.2405	1.42	0.07
GEOM. MEAN	0.00180	0.0008	0.0181	0.00081	0.7023	2.41	0.19
1ST QUARTILE	0.00121	0.0004	0.0109	0.00029	0.5376	1.62	0.16
2ND QUARTILE	0.00190	0.0008	0.0152	0.00052	0.7015	2.35	0.18
3RD QUARTILE	0.00319	0.0018	0.0249	0.00476	0.9429	3.41	0.24
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=MCKELLAR LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	9.68	6.08	0.264	0.381	0.522	0.510	0.120
MINIMUM	1.19	2.22	0.050	0.073	0.090	0.181	0.036
ARITH. MEAN	4.07	3.31	0.140	0.237	0.234	0.288	0.065
ARITH. STD. DEV	2.82	1.25	0.054	0.079	0.135	0.110	0.026
GEOM. MEAN	3.30	3.12	0.130	0.221	0.202	0.273	0.061
1ST QUARTILE	1.70	2.28	0.109	0.215	0.113	0.228	0.049
2ND QUARTILE	3.60	2.91	0.135	0.220	0.203	0.265	0.057
3RD QUARTILE	5.96	4.32	0.159	0.283	0.325	0.306	0.077
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	0.534	0.175	0.228	0.067	0.014	0.0074	0.005
MINIMUM	0.095	0.008	0.016	0.019	0.003	0.0023	0.001
ARITH. MEAN	0.203	0.087	0.088	0.044	0.009	0.0041	0.003
ARITH. STD. DEV	0.157	0.049	0.063	0.017	0.004	0.0014	0.002
GEOM. MEAN	0.169	0.070	0.069	0.041	0.008	0.0039	0.002
1ST QUARTILE	0.116	0.047	0.043	0.026	0.004	0.0032	0.001
2ND QUARTILE	0.136	0.078	0.073	0.046	0.009	0.0038	0.003
3RD QUARTILE	0.165	0.133	0.136	0.064	0.013	0.0050	0.004
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	11	11	11	11	11	11.00	11.00
MAXIMUM	0.01109	0.0016	0.0154	0.01494	1.5167	5.81	0.65
MINIMUM	0.00037	0.0005	0.0052	0.00003	0.3173	1.68	0.18
ARITH. MEAN	0.00309	0.0009	0.0104	0.00247	0.9984	3.14	0.38
ARITH. STD. DEV	0.00367	0.0003	0.0033	0.00489	0.3435	1.31	0.12
GEOM. MEAN	0.00182	0.0009	0.0099	0.00053	0.9309	2.92	0.36
1ST QUARTILE	0.00077	0.0007	0.0077	0.00025	0.8385	2.22	0.26
2ND QUARTILE	0.00148	0.0008	0.0108	0.00042	0.9929	2.60	0.38
3RD QUARTILE	0.00316	0.0010	0.0130	0.00070	1.1882	3.83	0.43
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=MOONBEAM LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	1.90	2.16	0.054	0.131	0.988	0.388	0.084
MINIMUM	0.54	0.97	0.016	0.043	0.060	0.102	0.013
ARITH. MEAN	1.11	1.48	0.028	0.074	0.475	0.179	0.044
ARITH. STD. DEV	0.50	0.40	0.013	0.027	0.327	0.075	0.023
GEOM. MEAN	1.00	1.43	0.026	0.069	0.349	0.169	0.039
1ST QUARTILE	0.55	1.10	0.018	0.046	0.203	0.134	0.024
2ND QUARTILE	1.12	1.43	0.023	0.066	0.410	0.171	0.037
3RD QUARTILE	1.57	1.77	0.036	0.100	0.754	0.186	0.062
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	0.356	0.186	0.294	0.195	0.023	0.0076	0.004
MINIMUM	0.088	0.005	0.027	0.023	0.001	0.0009	0.000
ARITH. MEAN	0.131	0.097	0.130	0.101	0.007	0.0040	0.002
ARITH. STD. DEV	0.077	0.064	0.097	0.056	0.007	0.0020	0.001
GEOM. MEAN	0.119	0.067	0.097	0.086	0.005	0.0034	0.002
1ST QUARTILE	0.094	0.038	0.040	0.057	0.003	0.0033	0.002
2ND QUARTILE	0.108	0.098	0.110	0.090	0.004	0.0036	0.002
3RD QUARTILE	0.116	0.163	0.207	0.154	0.012	0.0053	0.003
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	11	11	11	11	11	11.00	11.00
MAXIMUM	0.00896	0.0054	0.0357	0.01581	0.8675	1.53	0.16
MINIMUM	0.00013	0.0002	0.0012	0.00004	0.2678	0.59	0.06
ARITH. MEAN	0.00158	0.0010	0.0075	0.00257	0.6072	1.05	0.10
ARITH. STD. DEV	0.00255	0.0015	0.0099	0.00533	0.1636	0.32	0.03
GEOM. MEAN	0.00076	0.0005	0.0047	0.00042	0.5831	1.00	0.10
1ST QUARTILE	0.00049	0.0003	0.0023	0.00018	0.5319	0.75	0.08
2ND QUARTILE	0.00066	0.0004	0.0035	0.00027	0.5835	1.12	0.09
3RD QUARTILE	0.00144	0.0009	0.0067	0.00058	0.7421	1.31	0.12
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=MOOSONEE LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	9	9	9	9	9	9	9
MAXIMUM	1.25	3.50	0.029	0.114	1.591	0.561	0.068
MINIMUM	0.19	0.54	0.013	0.000	0.023	0.182	0.009
ARITH. MEAN	0.57	1.12	0.020	0.034	0.443	0.297	0.035
ARITH. STD. DEV	0.33	0.93	0.006	0.034	0.532	0.119	0.021
GEOM. MEAN	0.50	0.93	0.019	0.038	0.216	0.279	0.028
1ST QUARTILE	0.34	0.60	0.015	0.010	0.086	0.196	0.015
2ND QUARTILE	0.47	0.83	0.016	0.031	0.179	0.287	0.031
3RD QUARTILE	0.77	1.17	0.026	0.042	0.830	0.351	0.055
MISSING VALUES	0	0	0	0	0	0	1

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	9	9	9	9	9	9	9
MAXIMUM	0.432	0.079	0.120	0.209	0.018	0.0030	0.006
MINIMUM	0.155	0.005	0.010	0.031	0.001	0.0006	0.001
ARITH. MEAN	0.210	0.037	0.042	0.077	0.004	0.0013	0.002
ARITH. STD. DEV	0.087	0.025	0.038	0.058	0.006	0.0009	0.002
GEOM. MEAN	0.199	0.027	0.030	0.063	0.002	0.0011	0.001
1ST QUARTILE	0.161	0.014	0.015	0.036	0.001	0.0007	0.001
2ND QUARTILE	0.178	0.033	0.026	0.051	0.003	0.0010	0.001
3RD QUARTILE	0.226	0.057	0.072	0.109	0.005	0.0020	0.002
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	9	9	9	9	9	9.00	9.00
MAXIMUM	0.02766	0.0023	0.0329	0.01349	0.5882	1.44	0.14
MINIMUM	0.00012	0.0002	0.0006	0.00002	0.2111	0.30	0.01
ARITH. MEAN	0.00512	0.0010	0.0081	0.00390	0.4444	0.66	0.05
ARITH. STD. DEV	0.00897	0.0008	0.0112	0.00558	0.1132	0.38	0.04
GEOM. MEAN	0.00144	0.0007	0.0036	0.00069	0.4284	0.58	0.04
1ST QUARTILE	0.00046	0.0003	0.0012	0.00017	0.3852	0.37	0.03
2ND QUARTILE	0.00091	0.0007	0.0026	0.00029	0.4682	0.51	0.05
3RD QUARTILE	0.00724	0.0020	0.0134	0.00985	0.5348	0.92	0.07
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=OTTER ISLAND LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	6	6	6	6	6	6	6
MAXIMUM	1.59	1.02	0.044	0.112	0.205	0.135	0.163
MINIMUM	0.65	0.37	0.031	0.070	0.041	0.076	0.000
ARITH. MEAN	0.93	0.67	0.038	0.085	0.109	0.096	0.053
ARITH. STD. DEV	0.39	0.28	0.005	0.017	0.067	0.024	0.066
GEOM. MEAN	0.88	0.63	0.038	0.084	0.093	0.094	0.043
1ST QUARTILE	0.65	0.42	0.033	0.071	0.053	0.079	0.007
2ND QUARTILE	0.88	0.61	0.040	0.083	0.089	0.088	0.024
3RD QUARTILE	1.24	0.96	0.043	0.100	0.176	0.118	0.113
MISSING VALUES	1	1	1	1	1	1	1

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	6	6	6	6	6	6	6
MAXIMUM	0.085	0.053	0.113	0.058	0.005	0.0026	0.002
MINIMUM	0.060	0.019	0.015	0.003	0.001	0.0006	0.000
ARITH. MEAN	0.078	0.031	0.048	0.022	0.003	0.0011	0.001
ARITH. STD. DEV	0.010	0.014	0.041	0.021	0.002	0.0009	0.001
GEOM. MEAN	0.077	0.029	0.036	0.015	0.002	0.0009	0.001
1ST QUARTILE	0.070	0.019	0.018	0.008	0.001	0.0006	0.000
2ND QUARTILE	0.080	0.032	0.028	0.016	0.004	0.0006	0.001
3RD QUARTILE	0.085	0.043	0.089	0.039	0.005	0.0018	0.001
MISSING VALUES	1	1	1	1	1	1	1

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	6	6	6	6	6	6.00	6.00
MAXIMUM	0.00100	0.0013	0.0113	0.00996	0.9340	1.14	0.15
MINIMUM	0.00021	0.0004	0.0006	0.00013	0.6284	0.48	0.10
ARITH. MEAN	0.00060	0.0009	0.0032	0.00213	0.7499	0.69	0.12
ARITH. STD. DEV	0.00036	0.0005	0.0046	0.00438	0.1262	0.26	0.02
GEOM. MEAN	0.00049	0.0007	0.0017	0.00037	0.7417	0.66	0.12
1ST QUARTILE	0.00023	0.0004	0.0008	0.00013	0.6399	0.52	0.10
2ND QUARTILE	0.00063	0.0010	0.0013	0.00015	0.7192	0.63	0.12
3RD QUARTILE	0.00094	0.0013	0.0064	0.00511	0.8753	0.89	0.14
MISSING VALUES	1	1	1	1	1	1.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=PALMERSTON LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	16.09	8.35	0.312	1.599	1.996	0.887	0.212
MINIMUM	3.77	3.07	0.084	0.613	0.318	0.329	0.043
ARITH. MEAN	7.49	4.78	0.173	1.038	0.749	0.527	0.096
ARITH. STD. DEV	4.30	1.70	0.074	0.311	0.489	0.159	0.054
GEOM. MEAN	6.60	4.53	0.159	0.996	0.638	0.507	0.085
1ST QUARTILE	4.49	3.37	0.107	0.814	0.347	0.395	0.056
2ND QUARTILE	5.42	4.38	0.172	1.071	0.613	0.523	0.076
3RD QUARTILE	12.72	6.17	0.232	1.268	0.957	0.648	0.114
MISSING VALUES	1	1	1	1	1	1	1

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	0.357	0.388	0.401	0.499	0.037	0.0169	0.004
MINIMUM	0.091	0.050	0.006	0.077	0.002	0.0040	0.001
ARITH. MEAN	0.184	0.148	0.112	0.208	0.022	0.0082	0.003
ARITH. STD. DEV	0.080	0.094	0.118	0.132	0.013	0.0039	0.001
GEOM. MEAN	0.170	0.128	0.069	0.175	0.017	0.0075	0.003
1ST QUARTILE	0.121	0.090	0.037	0.103	0.009	0.0047	0.002
2ND QUARTILE	0.153	0.121	0.061	0.166	0.021	0.0082	0.003
3RD QUARTILE	0.214	0.200	0.153	0.303	0.036	0.0112	0.003
MISSING VALUES	1	1	1	1	1	1	1

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	12	12	12	12	12	12.00	12.00
MAXIMUM	0.00774	0.0021	0.0303	0.01970	3.4699	9.68	1.87
MINIMUM	0.00032	0.0005	0.0131	0.00022	0.4686	3.15	0.74
ARITH. MEAN	0.00207	0.0014	0.0221	0.00390	1.4202	5.34	1.21
ARITH. STD. DEV	0.00212	0.0004	0.0058	0.00615	0.9083	2.17	0.34
GEOM. MEAN	0.00143	0.0014	0.0214	0.00127	1.1832	4.98	1.17
1ST QUARTILE	0.00077	0.0012	0.0172	0.00041	0.6871	3.38	0.92
2ND QUARTILE	0.00147	0.0015	0.0223	0.00073	1.2805	4.70	1.20
3RD QUARTILE	0.00234	0.0017	0.0282	0.00855	2.0167	7.54	1.36
MISSING VALUES	1	1	1	1	1	1.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=PICKLE LAKE LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	1.61	1.93	0.078	0.148	0.757	0.529	0.092
MINIMUM	0.00	0.04	0.006	0.025	0.023	0.092	0.013
ARITH. MEAN	0.59	1.01	0.029	0.063	0.348	0.186	0.042
ARITH. STD. DEV	0.56	0.49	0.022	0.036	0.268	0.117	0.025
GEOM. MEAN	0.53	0.80	0.022	0.055	0.225	0.164	0.036
1ST QUARTILE	0.19	0.69	0.015	0.032	0.109	0.120	0.025
2ND QUARTILE	0.39	1.02	0.019	0.054	0.340	0.144	0.034
3RD QUARTILE	0.99	1.29	0.041	0.084	0.620	0.231	0.060
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.379	0.339	0.367	0.219	0.023	0.0071	0.015
MINIMUM	0.063	0.005	0.006	0.006	0.001	0.0006	0.001
ARITH. MEAN	0.143	0.140	0.118	0.097	0.008	0.0034	0.004
ARITH. STD. DEV	0.087	0.116	0.121	0.068	0.006	0.0025	0.004
GEOM. MEAN	0.125	0.084	0.065	0.064	0.005	0.0023	0.003
1ST QUARTILE	0.085	0.035	0.030	0.035	0.004	0.0008	0.001
2ND QUARTILE	0.122	0.109	0.083	0.091	0.008	0.0032	0.003
3RD QUARTILE	0.184	0.254	0.205	0.140	0.009	0.0060	0.007
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00506	0.0011	0.0036	0.01181	1.3437	1.44	0.21
MINIMUM	0.00017	0.0002	0.0006	0.00010	0.0748	0.12	0.04
ARITH. MEAN	0.00231	0.0005	0.0020	0.00261	0.4209	0.63	0.09
ARITH. STD. DEV	0.00178	0.0003	0.0009	0.00450	0.3410	0.41	0.05
GEOM. MEAN	0.00146	0.0004	0.0017	0.00052	0.3282	0.51	0.08
1ST QUARTILE	0.00046	0.0002	0.0012	0.00018	0.2124	0.27	0.05
2ND QUARTILE	0.00180	0.0005	0.0018	0.00023	0.3328	0.52	0.07
3RD QUARTILE	0.00408	0.0007	0.0027	0.00523	0.4845	0.96	0.13
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=PORT STANLEY LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	19.84	11.25	0.545	1.357	1.779	0.808	0.143
MINIMUM	4.54	2.58	0.116	0.564	0.259	0.364	0.044
ARITH. MEAN	8.81	5.52	0.305	0.926	0.730	0.503	0.098
ARITH. STD. DEV	3.95	2.67	0.144	0.258	0.408	0.133	0.033
GEOM. MEAN	8.18	5.01	0.273	0.893	0.647	0.489	0.092
1ST QUARTILE	6.54	3.56	0.221	0.741	0.496	0.408	0.069
2ND QUARTILE	8.20	4.48	0.276	0.895	0.592	0.477	0.098
3RD QUARTILE	9.83	6.71	0.445	1.209	0.836	0.555	0.128
MISSING VALUES	1	2	1	2	2	2	1

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.322	0.510	0.620	0.336	0.036	0.0278	0.004
MINIMUM	0.118	0.059	0.014	0.004	0.005	0.0072	0.001
ARITH. MEAN	0.168	0.195	0.175	0.114	0.016	0.0125	0.003
ARITH. STD. DEV	0.057	0.123	0.178	0.084	0.009	0.0058	0.001
GEOM. MEAN	0.161	0.167	0.112	0.081	0.014	0.0116	0.003
1ST QUARTILE	0.130	0.116	0.054	0.079	0.010	0.0092	0.003
2ND QUARTILE	0.148	0.167	0.108	0.099	0.016	0.0108	0.003
3RD QUARTILE	0.193	0.261	0.292	0.127	0.018	0.0155	0.004
MISSING VALUES	1	2	2	2	2	2	2

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00355	0.0075	0.0363	0.01116	12.0209	11.23	1.62
MINIMUM	0.00040	0.0014	0.0006	0.00038	0.6205	3.76	0.97
ARITH. MEAN	0.00194	0.0024	0.0268	0.00333	2.3251	6.43	1.24
ARITH. STD. DEV	0.00095	0.0017	0.0091	0.00431	3.1266	1.83	0.23
GEOM. MEAN	0.00169	0.0021	0.0205	0.00145	1.5489	6.23	1.22
1ST QUARTILE	0.00124	0.0016	0.0279	0.00047	0.8054	5.60	1.03
2ND QUARTILE	0.00157	0.0018	0.0290	0.00073	1.5404	6.15	1.17
3RD QUARTILE	0.00253	0.0025	0.0302	0.00773	2.3370	6.94	1.49
MISSING VALUES	2	2	2	2	1	2.00	2.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=QUETICO CENTRE LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	1.75	2.17	0.137	0.275	0.341	0.246	0.252
MINIMUM	0.25	0.73	0.002	0.049	0.045	0.075	0.013
ARITH. MEAN	0.74	1.20	0.054	0.109	0.144	0.134	0.066
ARITH. STD. DEV	0.43	0.47	0.037	0.077	0.093	0.046	0.067
GEOM. MEAN	0.64	1.13	0.039	0.090	0.119	0.128	0.046
1ST QUARTILE	0.40	0.78	0.032	0.053	0.073	0.099	0.024
2ND QUARTILE	0.67	1.16	0.044	0.071	0.111	0.131	0.044
3RD QUARTILE	1.08	1.43	0.078	0.154	0.220	0.160	0.077
MISSING VALUES	1	1	1	1	1	1	1

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.334	0.172	0.109	0.057	0.012	0.0049	0.006
MINIMUM	0.066	0.021	0.007	0.008	0.001	0.0006	0.000
ARITH. MEAN	0.124	0.068	0.041	0.033	0.004	0.0027	0.002
ARITH. STD. DEV	0.077	0.039	0.030	0.016	0.004	0.0015	0.001
GEOM. MEAN	0.109	0.060	0.032	0.029	0.003	0.0022	0.001
1ST QUARTILE	0.076	0.042	0.021	0.022	0.001	0.0013	0.001
2ND QUARTILE	0.095	0.068	0.031	0.033	0.002	0.0023	0.002
3RD QUARTILE	0.150	0.074	0.064	0.047	0.009	0.0043	0.002
MISSING VALUES	1	1	1	1	1	1	1

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00280	0.0013	0.0047	0.01549	1.2402	1.60	0.36
MINIMUM	0.00012	0.0002	0.0006	0.00009	0.0927	0.40	0.08
ARITH. MEAN	0.00110	0.0006	0.0026	0.00255	0.6555	0.77	0.16
ARITH. STD. DEV	0.00097	0.0004	0.0015	0.00482	0.3628	0.35	0.09
GEOM. MEAN	0.00068	0.0005	0.0020	0.00054	0.5416	0.71	0.14
1ST QUARTILE	0.00034	0.0002	0.0007	0.00018	0.4024	0.48	0.10
2ND QUARTILE	0.00077	0.0004	0.0033	0.00029	0.5290	0.71	0.12
3RD QUARTILE	0.00213	0.0009	0.0039	0.00313	1.0230	0.95	0.20
MISSING VALUES	1	1	1	1	1	1.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=SHALLOW LAKE LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	13.31	6.38	0.215	0.903	0.628	0.479	0.442
MINIMUM	2.40	0.83	0.056	0.242	0.091	0.000	0.011
ARITH. MEAN	5.52	3.44	0.151	0.568	0.367	0.262	0.139
ARITH. STD. DEV	3.56	1.89	0.053	0.271	0.167	0.129	0.128
GEOM. MEAN	4.70	2.88	0.141	0.505	0.325	0.279	0.094
1ST QUARTILE	3.09	2.04	0.119	0.302	0.262	0.217	0.069
2ND QUARTILE	3.72	3.09	0.145	0.583	0.375	0.240	0.095
3RD QUARTILE	8.59	5.42	0.207	0.836	0.478	0.357	0.193
MISSING VALUES	2	2	2	2	2	2	2

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	12	12	12	12	12	12	12
MAXIMUM	0.225	0.195	0.212	0.191	0.029	0.0098	0.005
MINIMUM	0.079	0.030	0.008	0.035	0.001	0.0024	0.001
ARITH. MEAN	0.133	0.102	0.095	0.094	0.011	0.0052	0.003
ARITH. STD. DEV	0.057	0.051	0.080	0.045	0.009	0.0025	0.001
GEOM. MEAN	0.123	0.090	0.061	0.085	0.006	0.0047	0.003
1ST QUARTILE	0.083	0.065	0.026	0.066	0.002	0.0033	0.003
2ND QUARTILE	0.108	0.089	0.060	0.076	0.009	0.0044	0.003
3RD QUARTILE	0.197	0.152	0.192	0.121	0.017	0.0075	0.005
MISSING VALUES	2	2	2	2	2	2	2

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	12	12	12	12	12	12.00	12.00
MAXIMUM	0.00152	0.0012	0.0203	0.00182	1.5807	7.66	1.11
MINIMUM	0.00024	0.0003	0.0018	0.00001	0.5936	2.19	0.36
ARITH. MEAN	0.00099	0.0009	0.0113	0.00056	1.0199	3.91	0.72
ARITH. STD. DEV	0.00047	0.0003	0.0052	0.00052	0.3657	1.60	0.31
GEOM. MEAN	0.00086	0.0008	0.0096	0.00033	0.9589	3.66	0.66
1ST QUARTILE	0.00062	0.0007	0.0084	0.00024	0.6239	2.91	0.39
2ND QUARTILE	0.00104	0.0010	0.0123	0.00039	1.0590	3.40	0.71
3RD QUARTILE	0.00148	0.0011	0.0135	0.00076	1.2903	4.76	1.01
MISSING VALUES	2	2	2	2	2	2.00	2.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=SMITHS FALLS LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	4.47	5.79	0.209	0.660	1.794	0.476	0.235
MINIMUM	0.72	0.15	0.055	0.194	0.134	0.207	0.046
ARITH. MEAN	2.53	3.11	0.110	0.417	0.835	0.325	0.102
ARITH. STD. DEV	1.04	1.59	0.047	0.159	0.548	0.076	0.060
GEOM. MEAN	2.29	2.44	0.101	0.387	0.643	0.317	0.089
1ST QUARTILE	1.64	2.39	0.070	0.274	0.337	0.258	0.057
2ND QUARTILE	2.68	3.06	0.093	0.390	0.787	0.327	0.075
3RD QUARTILE	3.43	4.21	0.148	0.523	1.143	0.391	0.159
MISSING VALUES	0	0	0	0	1	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.334	0.293	0.389	0.548	0.036	0.0205	0.005
MINIMUM	0.093	0.034	0.013	0.004	0.008	0.0036	0.001
ARITH. MEAN	0.186	0.136	0.124	0.252	0.016	0.0106	0.002
ARITH. STD. DEV	0.067	0.077	0.130	0.173	0.008	0.0051	0.001
GEOM. MEAN	0.175	0.115	0.072	0.160	0.014	0.0095	0.002
1ST QUARTILE	0.137	0.069	0.025	0.100	0.011	0.0067	0.001
2ND QUARTILE	0.186	0.123	0.055	0.233	0.013	0.0100	0.002
3RD QUARTILE	0.230	0.174	0.191	0.379	0.019	0.0136	0.003
MISSING VALUES	0	1	1	1	1	1	1

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00299	0.0039	0.0232	0.00241	1.5143	3.10	0.87
MINIMUM	0.00013	0.0002	0.0064	0.00027	0.5699	0.67	0.26
ARITH. MEAN	0.00141	0.0013	0.0136	0.00085	1.0281	2.30	0.53
ARITH. STD. DEV	0.00089	0.0009	0.0054	0.00081	0.3305	0.67	0.19
GEOM. MEAN	0.00111	0.0011	0.0126	0.00061	0.9763	2.17	0.50
1ST QUARTILE	0.00082	0.0006	0.0090	0.00031	0.6881	1.90	0.38
2ND QUARTILE	0.00110	0.0013	0.0133	0.00049	1.0567	2.51	0.55
3RD QUARTILE	0.00214	0.0016	0.0181	0.00141	1.3347	2.78	0.62
MISSING VALUES	1	1	1	1	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=TURKEY LAKES LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	9.13	3.35	0.205	0.318	0.521	0.317	0.161
MINIMUM	1.04	1.12	0.035	0.071	0.028	0.131	0.009
ARITH. MEAN	2.79	2.13	0.097	0.163	0.192	0.179	0.054
ARITH. STD. DEV	2.29	0.68	0.051	0.085	0.142	0.058	0.038
GEOM. MEAN	2.21	2.03	0.086	0.145	0.149	0.172	0.044
1ST QUARTILE	1.27	1.49	0.062	0.101	0.100	0.143	0.032
2ND QUARTILE	1.82	2.08	0.081	0.127	0.140	0.157	0.041
3RD QUARTILE	4.01	2.66	0.131	0.234	0.297	0.186	0.073
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.219	0.151	0.152	0.074	0.023	0.0065	0.004
MINIMUM	0.089	0.002	0.010	0.020	0.001	0.0011	0.000
ARITH. MEAN	0.114	0.065	0.058	0.040	0.006	0.0039	0.002
ARITH. STD. DEV	0.034	0.040	0.044	0.014	0.007	0.0014	0.001
GEOM. MEAN	0.111	0.044	0.045	0.038	0.003	0.0036	0.002
1ST QUARTILE	0.096	0.041	0.029	0.029	0.002	0.0031	0.001
2ND QUARTILE	0.102	0.063	0.044	0.039	0.003	0.0040	0.002
3RD QUARTILE	0.123	0.091	0.084	0.047	0.008	0.0047	0.002
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.01093	0.0019	0.0115	0.01795	1.2945	5.21	0.52
MINIMUM	0.00013	0.0003	0.0007	0.00001	0.3297	1.31	0.14
ARITH. MEAN	0.00184	0.0007	0.0062	0.00350	0.8612	2.11	0.26
ARITH. STD. DEV	0.00286	0.0005	0.0030	0.00607	0.2513	1.13	0.13
GEOM. MEAN	0.00098	0.0005	0.0053	0.00065	0.8203	1.91	0.23
1ST QUARTILE	0.00057	0.0003	0.0045	0.00023	0.6915	1.38	0.16
2ND QUARTILE	0.00089	0.0006	0.0056	0.00033	0.8813	1.56	0.20
3RD QUARTILE	0.00170	0.0009	0.0081	0.00564	1.0043	2.82	0.37
MISSING VALUES	0	0	0	0	0	0.00	0.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=UXBRIDGE LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	6.52	4.49	0.229	0.635	1.749	0.477	0.342
MINIMUM	2.85	1.61	0.062	0.230	0.050	0.155	0.029
ARITH. MEAN	4.17	2.92	0.112	0.459	0.649	0.281	0.094
ARITH. STD. DEV	1.18	0.89	0.049	0.131	0.483	0.093	0.095
GEOM. MEAN	4.03	2.80	0.105	0.441	0.475	0.268	0.072
1ST QUARTILE	3.17	2.29	0.085	0.366	0.304	0.218	0.050
2ND QUARTILE	3.95	2.67	0.095	0.457	0.610	0.272	0.066
3RD QUARTILE	5.00	3.66	0.130	0.574	0.809	0.330	0.087
MISSING VALUES	2	1	1	1	1	1	2

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	11	11	11	11	11	11	11
MAXIMUM	0.192	0.361	0.186	0.152	0.032	0.0199	0.004
MINIMUM	0.055	0.010	0.017	0.006	0.001	0.0006	0.000
ARITH. MEAN	0.114	0.111	0.068	0.062	0.012	0.0069	0.003
ARITH. STD. DEV	0.050	0.095	0.053	0.039	0.009	0.0051	0.001
GEOM. MEAN	0.104	0.083	0.052	0.049	0.009	0.0052	0.002
1ST QUARTILE	0.065	0.071	0.029	0.041	0.005	0.0040	0.002
2ND QUARTILE	0.119	0.083	0.051	0.055	0.012	0.0062	0.003
3RD QUARTILE	0.149	0.118	0.100	0.078	0.015	0.0078	0.003
MISSING VALUES	3	1	1	1	1	1	1

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	11	11	11	11	11	11.00	11.00
MAXIMUM	0.04454	0.0060	0.0248	0.00229	2.9918	4.05	0.75
MINIMUM	0.00012	0.0002	0.0006	0.00016	0.5001	2.19	0.32
ARITH. MEAN	0.00519	0.0015	0.0142	0.00074	1.3643	3.06	0.57
ARITH. STD. DEV	0.01384	0.0021	0.0072	0.00069	1.0460	0.66	0.14
GEOM. MEAN	0.00093	0.0008	0.0107	0.00053	1.0642	3.00	0.55
1ST QUARTILE	0.00047	0.0004	0.0079	0.00027	0.5918	2.45	0.46
2ND QUARTILE	0.00090	0.0006	0.0147	0.00053	0.8486	3.03	0.61
3RD QUARTILE	0.00142	0.0018	0.0199	0.00096	2.7749	3.64	0.67
MISSING VALUES	1	1	1	1	1	2.00	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
STATION=WILKESPORT LOVOL SITE NO.1

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	22.09	9.13	0.522	1.638	2.735	0.975	0.149
MINIMUM	4.71	0.12	0.018	0.552	0.278	0.433	0.040
ARITH. MEAN	12.12	5.24	0.210	0.992	1.012	0.652	0.093
ARITH. STD. DEV	4.51	2.53	0.145	0.344	0.654	0.153	0.030
GEOM. MEAN	11.37	3.97	0.160	0.940	0.856	0.636	0.088
1ST QUARTILE	9.40	3.70	0.100	0.717	0.539	0.558	0.072
2ND QUARTILE	11.18	4.81	0.168	0.914	0.855	0.639	0.093
3RD QUARTILE	14.76	7.06	0.322	1.351	1.311	0.679	0.118
MISSING VALUES	0	0	0	0	0	0	0

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	13	13	13	13	13	13	13
MAXIMUM	0.355	0.618	0.643	0.497	0.051	0.0200	0.007
MINIMUM	0.092	0.042	0.020	0.003	0.004	0.0046	0.001
ARITH. MEAN	0.181	0.205	0.176	0.163	0.021	0.0099	0.004
ARITH. STD. DEV	0.073	0.145	0.171	0.129	0.015	0.0041	0.002
GEOM. MEAN	0.170	0.168	0.119	0.109	0.016	0.0092	0.003
1ST QUARTILE	0.133	0.127	0.062	0.083	0.008	0.0069	0.003
2ND QUARTILE	0.156	0.172	0.113	0.135	0.019	0.0095	0.003
3RD QUARTILE	0.208	0.246	0.282	0.222	0.028	0.0116	0.004
MISSING VALUES	0	0	0	0	0	0	0

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	13	13	13	13	13	13.00	13.00
MAXIMUM	0.00350	0.0046	0.0537	0.01495	2.9728	12.65	1.91
MINIMUM	0.00092	0.0018	0.0204	0.00059	0.3884	4.28	0.83
ARITH. MEAN	0.00223	0.0030	0.0353	0.00340	1.3379	7.81	1.20
ARITH. STD. DEV	0.00085	0.0009	0.0102	0.00478	0.7067	2.44	0.31
GEOM. MEAN	0.00206	0.0029	0.0339	0.00158	1.1809	7.46	1.17
1ST QUARTILE	0.00150	0.0021	0.0282	0.00064	0.8564	6.20	1.00
2ND QUARTILE	0.00232	0.0030	0.0355	0.00085	1.2339	7.25	1.11
3RD QUARTILE	0.00297	0.0036	0.0432	0.00575	1.6643	9.60	1.40
MISSING VALUES	0	0	0	0	0	0.00	0.00

PART IV

SUMMARY STATISTICS OF OBSERVED CONCENTRATION BY REGION

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION

REGION=CE

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	35	35	35	35	35	35	35
MAXIMUM	7.05	6.73	3.531	11.772	3.462	0.558	0.561
MINIMUM	1.00	1.19	0.062	0.083	0.050	0.080	0.014
ARITH. MEAN	3.60	3.24	0.236	0.732	0.641	0.265	0.105
ARITH. STD. DEV	1.45	1.29	0.595	1.991	0.763	0.122	0.132
GEOM. MEAN	3.27	3.02	0.135	0.376	0.390	0.238	0.070
1ST QUARTILE	2.72	2.34	0.090	0.222	0.216	0.158	0.040
2ND QUARTILE	3.60	3.23	0.120	0.373	0.361	0.252	0.064
3RD QUARTILE	4.42	3.74	0.158	0.546	0.666	0.334	0.092
MISSING VALUES	4	3	2	2	3	3	4

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	35	35	35	35	35	35	35
MAXIMUM	0.375	0.361	0.386	0.177	0.037	0.0199	0.006
MINIMUM	0.055	0.010	0.003	0.004	0.001	0.0006	0.000
ARITH. MEAN	0.152	0.111	0.104	0.056	0.012	0.0060	0.003
ARITH. STD. DEV	0.081	0.081	0.096	0.042	0.009	0.0041	0.001
GEOM. MEAN	0.135	0.086	0.063	0.041	0.009	0.0048	0.002
1ST QUARTILE	0.092	0.051	0.034	0.031	0.005	0.0037	0.002
2ND QUARTILE	0.128	0.084	0.065	0.045	0.010	0.0051	0.003
3RD QUARTILE	0.189	0.151	0.167	0.071	0.015	0.0072	0.003
MISSING VALUES	5	3	3	3	3	3	3

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	35	35	35	35	35	35.00	35.00
MAXIMUM	0.04454	0.0060	0.0250	0.02330	2.9918	4.65	15.30
MINIMUM	0.00012	0.0002	0.0006	0.00014	0.5001	1.63	0.19
ARITH. MEAN	0.00305	0.0010	0.0134	0.00240	1.2835	2.88	0.97
ARITH. STD. DEV	0.00781	0.0012	0.0071	0.00494	0.7172	0.72	2.58
GEOM. MEAN	0.00113	0.0007	0.0106	0.00087	1.1261	2.79	0.53
1ST QUARTILE	0.00059	0.0005	0.0078	0.00036	0.7569	2.27	0.34
2ND QUARTILE	0.00108	0.0007	0.0131	0.00064	1.0616	2.76	0.52
3RD QUARTILE	0.00268	0.0010	0.0196	0.00215	1.6400	3.46	0.69
MISSING VALUES	3	3	3	3	3	4.00	2.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION

REGION=NE

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	91	91	91	91	91	91	91
MAXIMUM	35.76	6.08	0.264	0.441	1.591	0.869	0.191
MINIMUM	0.19	0.43	0.013	0.000	0.022	0.099	0.009
ARITH. MEAN	3.87	2.28	0.087	0.160	0.266	0.251	0.058
ARITH. STD. DEV	4.87	1.12	0.058	0.104	0.263	0.134	0.035
GEOM. MEAN	2.37	2.01	0.067	0.132	0.182	0.226	0.049
1ST QUARTILE	1.20	1.53	0.040	0.081	0.099	0.163	0.035
2ND QUARTILE	2.16	2.10	0.075	0.128	0.176	0.223	0.052
3RD QUARTILE	4.71	2.88	0.129	0.216	0.355	0.290	0.071
MISSING VALUES	7	7	7	7	7	7	8

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	91	91	91	91	91	91	91
MAXIMUM	0.635	1.580	2.590	0.625	0.039	0.0367	0.099
MINIMUM	0.067	0.002	0.003	0.003	0.001	0.0006	0.000
ARITH. MEAN	0.167	0.163	0.193	0.091	0.008	0.0057	0.005
ARITH. STD. DEV	0.109	0.280	0.405	0.117	0.007	0.0066	0.012
GEOM. MEAN	0.146	0.075	0.079	0.059	0.006	0.0039	0.003
1ST QUARTILE	0.102	0.042	0.034	0.033	0.003	0.0029	0.002
2ND QUARTILE	0.134	0.079	0.073	0.054	0.006	0.0038	0.003
3RD QUARTILE	0.166	0.154	0.150	0.086	0.011	0.0059	0.005
MISSING VALUES	7	7	7	7	7	7	7

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	91	91	91	91	91	91.00	91.00
MAXIMUM	0.05417	0.0064	0.1599	0.01930	2.0514	19.26	0.65
MINIMUM	0.00012	0.0002	0.0006	0.00001	0.2111	0.30	0.01
ARITH. MEAN	0.00387	0.0009	0.0118	0.00295	0.7911	2.69	0.25
ARITH. STD. DEV	0.00778	0.0010	0.0180	0.00508	0.3664	2.56	0.15
GEOM. MEAN	0.00157	0.0007	0.0077	0.00066	0.7104	2.02	0.19
1ST QUARTILE	0.00063	0.0004	0.0046	0.00023	0.5286	1.33	0.14
2ND QUARTILE	0.00151	0.0007	0.0090	0.00047	0.7515	2.17	0.20
3RD QUARTILE	0.00319	0.0010	0.0131	0.00178	1.0038	3.09	0.35
MISSING VALUES	7	7	7	7	7	7.00	7.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION

REGION=NW

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	71	71	71	71	71	71	71
MAXIMUM	2.48	2.27	0.146	0.275	0.757	0.529	0.713
MINIMUM	0.00	0.02	0.000	0.006	0.012	0.059	0.000
ARITH. MEAN	0.66	1.01	0.039	0.082	0.211	0.146	0.069
ARITH. STD. DEV	0.51	0.56	0.031	0.059	0.189	0.083	0.103
GEOM. MEAN	0.57	0.79	0.032	0.066	0.138	0.131	0.042
1ST QUARTILE	0.29	0.62	0.020	0.047	0.073	0.095	0.023
2ND QUARTILE	0.49	0.92	0.031	0.066	0.144	0.124	0.043
3RD QUARTILE	0.89	1.32	0.045	0.099	0.300	0.152	0.071
MISSING VALUES	3	3	3	3	3	3	3

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	71	71	71	71	71	71	71
MAXIMUM	1.216	0.339	0.367	0.223	0.023	0.0071	0.030
MINIMUM	0.032	0.003	0.003	0.003	0.001	0.0006	0.000
ARITH. MEAN	0.133	0.077	0.073	0.059	0.006	0.0027	0.003
ARITH. STD. DEV	0.149	0.070	0.084	0.054	0.005	0.0019	0.004
GEOM. MEAN	0.107	0.052	0.041	0.037	0.004	0.0020	0.001
1ST QUARTILE	0.076	0.032	0.018	0.017	0.002	0.0009	0.001
2ND QUARTILE	0.094	0.054	0.037	0.044	0.005	0.0023	0.001
3RD QUARTILE	0.124	0.097	0.103	0.079	0.008	0.0042	0.002
MISSING VALUES	3	4	3	3	3	3	3

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	71	71	71	71	71	71.00	71.00
MAXIMUM	0.03632	0.0014	0.0113	0.01685	1.4028	1.91	0.37
MINIMUM	0.00012	0.0002	0.0006	0.00005	0.0000	0.01	0.01
ARITH. MEAN	0.00199	0.0006	0.0026	0.00273	0.5033	0.67	0.12
ARITH. STD. DEV	0.00443	0.0003	0.0020	0.00462	0.3281	0.40	0.08
GEOM. MEAN	0.00102	0.0005	0.0020	0.00058	0.4194	0.52	0.10
1ST QUARTILE	0.00048	0.0003	0.0008	0.00018	0.2858	0.38	0.07
2ND QUARTILE	0.00101	0.0005	0.0023	0.00027	0.4424	0.59	0.09
3RD QUARTILE	0.00232	0.0008	0.0036	0.00166	0.6478	0.85	0.16
MISSING VALUES	3	3	3	3	3	3.00	3.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION

REGION=SE

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	47	47	47	47	47	47	47
MAXIMUM	16.19	6.88	0.400	1.722	1.794	1.072	6.117
MINIMUM	0.72	0.15	0.036	0.050	0.011	0.115	0.046
ARITH. MEAN	3.08	3.53	0.121	0.429	0.598	0.334	0.303
ARITH. STD. DEV	2.46	1.48	0.065	0.331	0.481	0.203	0.946
GEOM. MEAN	2.58	3.11	0.108	0.333	0.380	0.294	0.132
1ST QUARTILE	1.66	2.61	0.081	0.230	0.202	0.210	0.074
2ND QUARTILE	2.68	3.07	0.103	0.334	0.499	0.282	0.110
3RD QUARTILE	3.45	4.66	0.143	0.519	0.900	0.391	0.169
MISSING VALUES	6	6	5	5	7	6	6

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	47	47	47	47	47	47	47
MAXIMUM	0.683	0.293	0.389	0.548	0.042	0.0567	0.006
MINIMUM	0.093	0.018	0.003	0.003	0.005	0.0033	0.001
ARITH. MEAN	0.215	0.117	0.103	0.122	0.017	0.0125	0.003
ARITH. STD. DEV	0.131	0.073	0.108	0.131	0.009	0.0115	0.001
GEOM. MEAN	0.189	0.094	0.061	0.068	0.015	0.0092	0.002
1ST QUARTILE	0.137	0.063	0.027	0.046	0.010	0.0051	0.002
2ND QUARTILE	0.173	0.101	0.053	0.080	0.014	0.0079	0.002
3RD QUARTILE	0.246	0.170	0.143	0.143	0.020	0.0143	0.003
MISSING VALUES	6	7	7	7	7	7	7

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	47	47	47	47	47	47.00	47.00
MAXIMUM	0.00533	0.0059	0.0454	0.00449	1.5713	9.39	2.12
MINIMUM	0.00013	0.0002	0.0058	0.00025	0.4809	0.67	0.13
ARITH. MEAN	0.00167	0.0015	0.0173	0.00094	1.0302	2.72	0.55
ARITH. STD. DEV	0.00117	0.0011	0.0102	0.00101	0.2904	1.33	0.37
GEOM. MEAN	0.00131	0.0012	0.0148	0.00064	0.9852	2.50	0.46
1ST QUARTILE	0.00085	0.0008	0.0091	0.00037	0.8118	2.02	0.33
2ND QUARTILE	0.00136	0.0012	0.0143	0.00048	1.0567	2.63	0.45
3RD QUARTILE	0.00231	0.0017	0.0225	0.00087	1.2668	2.93	0.63
MISSING VALUES	7	7	7	7	6	6.00	5.00

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
SUMMARY STATISTICS OF CONCENTRATION
REGION=SW

	SULFUR.DIOX UG/M3	SULFATE UG/M3	NITRIC UG/M3	NITRATE UG/M3	CALCIUM UG/M3	CHLORIDE UG/M3	POTASSIUM UG/M3
# OF SAMPLES	63	63	63	63	63	63	63
MAXIMUM	41.15	14.32	0.704	1.638	2.735	1.091	0.442
MINIMUM	2.40	0.12	0.018	0.242	0.091	0.000	0.011
ARITH. MEAN	10.07	5.06	0.233	0.944	0.759	0.552	0.108
ARITH. STD. DEV	6.33	2.69	0.138	0.332	0.477	0.217	0.064
GEOM. MEAN	8.57	4.11	0.196	0.876	0.638	0.523	0.094
1ST QUARTILE	5.26	3.43	0.131	0.740	0.404	0.407	0.075
2ND QUARTILE	9.60	4.57	0.214	0.902	0.645	0.538	0.099
3RD QUARTILE	12.40	6.35	0.296	1.210	0.951	0.664	0.125
MISSING VALUES	4	5	4	5	5	5	4

	SODIUM UG/M3	IRON UG/M3	ALUMINIUM UG/M3	MAGNESIUM UG/M3	LEAD UG/M3	MANGANESE UG/M3	COPPER UG/M3
# OF SAMPLES	63	63	63	63	63	63	63
MAXIMUM	0.389	0.618	0.643	0.499	0.072	0.0278	0.007
MINIMUM	0.079	0.030	0.006	0.003	0.001	0.0024	0.001
ARITH. MEAN	0.178	0.180	0.147	0.152	0.020	0.0100	0.003
ARITH. STD. DEV	0.074	0.109	0.141	0.105	0.014	0.0048	0.001
GEOM. MEAN	0.166	0.152	0.095	0.112	0.014	0.0089	0.003
1ST QUARTILE	0.129	0.100	0.053	0.079	0.009	0.0068	0.003
2ND QUARTILE	0.163	0.167	0.095	0.122	0.017	0.0097	0.003
3RD QUARTILE	0.207	0.217	0.201	0.192	0.029	0.0127	0.004
MISSING VALUES	4	5	5	5	5	5	5

	NICKEL UG/M3	VANADIUM UG/M3	ZINC UG/M3	CADMIUM UG/M3	SULFATE NYL UG/M3	TOTAL SULFUR UG/M**3	TOTAL N NITRATE UG/M**3
# OF SAMPLES	63	63	63	63	63	63.00	63.00
MAXIMUM	0.01367	0.0075	0.0565	0.01970	12.0209	21.73	1.93
MINIMUM	0.00024	0.0003	0.0006	0.00001	0.3134	2.19	0.36
ARITH. MEAN	0.00210	0.0022	0.0285	0.00310	1.5030	6.77	1.18
ARITH. STD. DEV	0.00197	0.0014	0.0133	0.00477	1.5685	3.26	0.36
GEOM. MEAN	0.00161	0.0018	0.0236	0.00117	1.1861	6.13	1.11
1ST QUARTILE	0.00122	0.0013	0.0202	0.00056	0.7619	4.61	0.97
2ND QUARTILE	0.00160	0.0018	0.0288	0.00081	1.2303	6.33	1.14
3RD QUARTILE	0.00254	0.0027	0.0374	0.00253	1.8699	8.12	1.43
MISSING VALUES	5	5	5	5	4	5.00	5.00

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